

Enhancement of Shorelands Management

A. Summary of Coastal Management Problem

As Virginia's lead agency in coastal lands planning and management, the Chesapeake Bay Local Assistance Department has worked with localities for over ten years to improve consideration of cumulative and secondary impacts through local comprehensive planning. Currently though, only a framework exists to mitigate these impacts of growth and development.

The Chesapeake Bay Preservation Act and its associated regulations contain requirements for a number of locally administered water quality protection measures to minimize the impacts of shoreland development on a case-by-case basis. In order to ensure that local governments adequately consider the *long-term, cumulative effects* of individual land use decisions, the regulations also contain a requirement that Tidewater localities' comprehensive plans address specific issues including:

- physical constraints to development;
- protection of potable water supply, including groundwater resources;
- relationship of land use to commercial and recreational fisheries;
- shoreline erosion control;
- public and private access to waterfront areas, including the density of docks and piers;
- existing pollution sources; and,
- potential water quality improvement through redevelopment of intensely developed areas.

The comprehensive plans are to include appropriate background information on these issues, relevant data, analysis of the data, goals and objectives and implementation measures. These requirements are discussed at length in the Chesapeake Bay Local Assistance Manual, which is the primary policy guidance document for local governments implementing the Bay Act and Regulations. Though the manual describes a complex framework and process for controlling impacts of growth, it stops just short of providing the *model* ("shoreland development protocol") for local government implementation. Additionally, the impacts to sensitive coastal resources are not quantified.

In the absence of a specifically defined shoreland planning protocol, the Department has allowed localities to address many of the plan requirements on a very general level. While CBLAD realizes the full intent of the regulations are not being met, the task of implementation is severely hampered by the lack of a methodology to collectively analyze and predict these impacts from development. Considerable work remains to truly implement the comprehensive plan requirements of the Bay Act.

B. Identification of Program Changes

This strategy is designed to link information on land characteristics and requirements to sustain sensitive coastal habitats with land use and management decisions. This will involve developing an enhanced model or methodology for integrated shorelands management that will be used by local governments to improve their comprehensive planning and land

management efforts. The program change will take the form of modified guidance for compliance with the Bay Act requirements for local comprehensive plans.

- **Development of Shoreland Planning Methodology**

A shoreland planning protocol will be developed so that local governments can comprehensively evaluate the suitability of shorelands for development and recognize the degree of suitability in their comprehensive plans. The Chesapeake Bay Local Assistance Department will identify data sets, which should be routinely available for local planners to evaluate various types of development. The Department will draft a suitability index to classify the development potential of land based on physical constraints to development and proximity to sensitive coastal resources. A GIS methodology for collective assessment of the data will be developed.

- **Revisions to CBLAD Technical and Regulatory documents**

The adopted shoreland planning protocol will be incorporated into the CBLAD Local Assistance Manual (required by regulation to reflect the most current planning and zoning techniques) which provides guidance to localities for meeting the Bay Act requirements for comprehensive plans and ordinances. CBLAD will also be concurrently developing guidance to include in the Manual on the zoning and subdivision provisions necessary to meet the final phase of local program development. This guidance will reflect the new shoreland planning advancements.

C. Anticipated Effects of Program Changes

- **Improved consistency with the comprehensive planning requirements of the Chesapeake Bay Preservation Act.**

CBLAD currently requires that localities examine shoreland management issues such as physical constraints to development, shoreline erosion, and public access in their comprehensive plans. The Regulations contain a number of detailed requirements for localities to analyze land use issues relative to water quality protection. Because the Department has not been able to recommend a methodology for conducting such analysis, however, CBLAD has allowed localities to address many of the plan requirements on a very general level. As a result, the full potential of the Bay Act's comprehensive plan requirements has not yet been realized. Developing the shoreland planning protocol described in this strategy will address this gap and will result in much more detailed plans for shorelands. Local implementation of the policies of their comprehensive plans should then result in changes in land use designations and zoning densities, and recommendations for controlling the impacts of other activities associated with shoreland development such as shoreline erosion control and recreational boating.

- **Provide a mechanism for localities to better evaluate and manage the impacts of shoreland development proposals.**

The Bay Act Regulations require that localities apply a series of performance criteria to development that occurs within locally designated Chesapeake Bay Preservation Areas. The Department has not, however, been able to provide guidance to localities on ways to link land suitability and resource protection to the broader suite of land management techniques available for minimizing the impacts of development. Developing the shoreland planning

protocol will address this issue by providing localities with a mechanism for quickly and easily determining the suitability of land for various types of development and recommending techniques for minimizing the impacts of that development. This will allow localities to make more informed, and timely, decisions regarding development proposals.

- **Expand the utility of the Shoreline Inventory Program at VIMS for enhanced Bay Act planning requirements**

To facilitate site specific review of development proposals, the shoreland assessment protocol will require a significant amount of high-resolution data. Much of this will be available from local files and maps, but some will need to be generated. The proposed shorelands strategy will work to extend an existing coastal shoreline inventory program to increase the utility of its database to local planners. VIMS operates a Comprehensive Coastal Inventory (CCI) that routinely maps conditions along all of Virginia's tidal shorelines. Existing inventory protocols will be expanded to generate additional information identified by CBLAD and local governments as important to the assessment of shorelands and their development suitability. At a minimum, procedures for documenting recent shoreline erosion rates within each locality will be developed.

D. Appropriateness of Program Changes

This strategy directly addresses the priority needs by providing a tool for local government to address CSIs. There is a need of local governments to better address the impacts from the historic patterns of development. By developing a shoreland planning protocol and making appropriate changes to the local assistance manual and guidelines, CBLAD can increase compliance with the Chesapeake Bay Preservation Act. Through the rolling comprehensive plan reviews (every 5-years), this approach will better address long-term land use decisions and development patterns. CBLAD is solely responsible for the implementation of the Bay Act and can effect changes by having the Board take necessary steps to improve implementation.

E. General Work Plan

Many of the steps outlined below will be completed by a project coordinator at the Chesapeake Bay Local Assistance Department. Several of the tasks will require input from stakeholders or experts on more technical issues. In these cases, workgroups will be formed in order to receive input and to review documents produced by the project coordinator. Completing several of the FY 2000 tasks may require contractual activities for technical assistance from experts in various fields and for data acquisition for Phase I of the Demonstration Project. Phase II of the Shoreland Planning Demonstration Project in FY 2001 will also require contractual services. The specific steps necessary to complete the project are described below for each fiscal year.

FISCAL YEAR 2000

(October 2000 – September 2001)

Task 1: Background Research

CBLAD will conduct a literature search to begin the project. Through this effort, the Department will compile information on land characteristics that determine development suitability. Other factors, such as proximity to sensitive coastal resources will also be considered in this research effort. Finally, the Department will investigate land management mechanisms available to minimize the water quality and habitat impacts of development on each type of sensitive area.

Task 2: Land Suitability Criteria and Index

CBLAD will assemble a Shoreland Planning Workgroup composed of state and local representatives with expertise in various aspects of land planning and management. Initially, findings from the research effort will be presented to the workgroup to provide background for the project. Based on input from the workgroup, CBLAD will draft a land suitability index capable of classifying the development potential of land based on its physical constraints to development and proximity to sensitive coastal resources. This task will also entail developing criteria for minimizing development impacts on each sensitive feature.

Task 3: GIS Needs Assessment and Protocol for Shoreland Planning

This task will address the data acquisition and programming needs for developing a Geographic Information System capable of meeting the identified shoreland planning needs. CBLAD will organize a workgroup composed of GIS experts from state and local government to provide input on this issue. In addition, the workgroup will be asked to provide recommendations for implementing the GIS aspects of the project, including the benefits of both centralized and decentralized initiatives.

Task 4: Locality Selection & Data Collection- Shoreland Planning Demonstration Project

A locality or PDC region will be selected to conduct a case study using the new shoreland planning protocol. This selection will be based upon evaluation of data needs to conduct the case study and the interest expressed by the locality for better land management tools. Shoreline inventory data was developed for several Tidewater localities in 2000 through reprogramming of FY 97 Section 309 funds. It was anticipated that this data would be needed for the first phase of the demonstration project. Other necessary data will be acquired.

Task 5: Shoreline Situation Report Protocol Revisions

The Virginia Institute of Marine Science's Comprehensive Coastal Inventory (CCI) Program produces Shoreline Situation Reports for Tidewater localities. The Reports provide a tool for assessing conditions along tidal shorelines and contain a wealth of information necessary for effective shoreland planning. As part of this strategy, the CCI Program will evaluate and revise the current protocol used to develop Shoreline Situation Reports in order to meet any identified needs for completing local shoreland planning initiatives.

FISCAL YEAR 2001

(October 2001 – September 2002)

Task 6: Implementation of Shoreland Planning Demonstration Project

This task will entail contractual work the locality or Planning District Commission (selected under Task 4) to implement the shoreland planning protocols developed in the first year of the project. It will be the major component of the second year's work. The locality or PDC chosen for the demonstration project will illustrate the application of the protocol for both site plan review and comprehensive planning.

Task 7: Shoreland Planning Protocol

CBLAD will develop a document containing the results of the Shoreland Planning Project. It will describe the concepts of shoreland planning and detail the factors to be considered. The guidance will also contain information on the land suitability index and criteria and on the demonstration project. It will be developed as a stand-alone document but will also become a chapter of a revised *CBLAD Local Assistance Manual*.

Task 8: Incorporate Program Changes

The Chesapeake Bay Local Assistance Board (CBLAB) will be informed on a regular basis of progress in developing the shoreland planning guidance and will be asked to approve a final document as a component of the Department's Local Assistance Manual once the guidance is fully developed. The manual is mandated by the Bay Act Regulations and required to be "updated periodically to reflect the most current planning and zoning techniques and effective best management practices." CBLAD will also be developing guidance to be included in the Manual on the zoning and subdivision provisions necessary to meet the final phase of local program development. This guidance, which will reflect the shoreland planning advancements will also be submitted to CBLAB for approval.

Task 9: Shoreland Planning Outreach Initiative

In order to disseminate the results of this project and to teach local governments about the new comprehensive plan requirements, CBLAD will conduct an outreach initiative aimed at Tidewater local governments. This initiative will involve a series of workshops and locality specific training as requested. Printing and distribution of the Shoreland Planning Publication will also be included in this task. Any computer programs developed as part of this project will be distributed to localities upon request.

E. Summary of Program Costs

	FY 2000	FY 2001
Personnel	37,157	38,354
Fringe	2,843	2,934
Equipment		
Travel	500	1,500
Supplies	750	2,212
Contractual	38,750	30,000
Other		5,000
Total	80,000	80,000

FY 2000: \$80,000

Salary, fringe, travel and **supplies** for CBLAD staff to undertake and coordinate tasks 1-5.
Contractual services for specific studies, technical services, or data acquisition necessary to complete tasks 1-5

FY 2001: \$80,000

Salary and **fringe** for CBLAD staff to undertake and coordinate tasks 6-8.
Travel and **supplies** to support tasks 6-8 and task 9 workshops and outreach.
Contractual services to complete task 6 – Shoreland Demonstration Project.
Other: Printing and distribution costs for task 9 – Shoreland Planning Publication.

F. Likelihood of Attaining Program Change

Because the desired program change will be implemented through the framework of existing state and local partnerships, its likelihood of success is high. The new Chesapeake Bay Agreement and other state efforts are looking closely at issues related to population growth and development. Many of the localities that CBLAD works with have expressed an interest in identifying opportunities to improve development activities through better decision-making processes that direct growth into suitable areas. Developing a shoreland planning protocol will enable CBLAD to help address this issue by providing new guidance to the localities of Tidewater, Virginia.

G. Fiscal and Technical Needs

Though much of the technical expertise necessary to undertake many aspects of the project (development of the land suitability characteristics, index and classification, as well as the GIS workgroup) are presently available through state agencies and local governments there is a need for a position to manage the efforts. One new position at CBLAD will be established to coordinate the development and implementation of the project. Contractual funding will be needed for data development and the local government pilot project.

Funding and staffing levels of natural resource agencies in Virginia are currently fixed, with no new funding likely and reductions in agency budgets required. Because of the staffing and resource demands of implementing and enforcing the many provisions of the Bay Act, enhancing the shoreland management provisions of the Act's Regulations will not be possible without additional funds.